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Molasses

Issue

NOTICE

A public meeting of producers, distributors and users of inedible molasses will be held November 14, at 2:00 p.m., in the Jefferson Auditorium, South Agriculture Building, Washington, D. C.

The purpose of the meeting is to provide an opportunity for all interested parties to discuss current and prospective supplies and demand for inedible molasses and possibilities for expanding feed usage. The material contained in this report, including a review of the current market situation and statistical series on molasses supplies and utilization over a period of years, should be helpful as background information to the molasses trade in the discussions.

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INDUSTRIAL MOLASSES SUPPLIES AND UTILIZATION

Introduction

This report presents a review of developments that have occurred in the molasses market since the issuance of "Sugar Reports" 12-M in October 1951. A discussion of price changes that have taken place, supplies, utilization and prospective demand-supply conditions for molasses is included. The report also brings up-to-date statistical series that have appeared in previous molasses issues of "Sugar Reports."

General Market Summary

The instability of the market for industrial molasses has once again been demonstrated by the decline in the New York wholesale price from 37.5 cents per gallon in January of 1951 to 11.5 cents on October 21, 1952; during the same period the New Orleans price decreased from 34.5 cents to 9.5 cents. The January 1951 price represented the peak reached in molasses prices following their rapid rise after the outbreak of the Korean war.

Traditionally, the price of molasses has followed closely the price of alcohol. This historical relationship, as well as alcohol and molasses price movements since July 1, 1950, are shown in Figure 1. When the Korean war began, demand for alcohol increased sharply at a time when alcohol stocks were low. The needs of the chemical industry in addition to anticipated usage of domestically produced alcohol in the synthetic rubber program brought about keen bidding for available alcohol supplies. As a result the price of alcohol advanced from 37 cents (delivered east of Rocky Mountains in tank-car lots) in June of 1950 to 75 cents in September and 90 cents in November at which level alcohol prices were frozen by the Office of Price Stabilization.

The increased demand for and rise in price of alcohol resulted in the bidding up of molasses prices by fermentation alcohol producers. This condition as well as the desire of the food trade and other users to obtain at least minimum requirements from a supply which appeared at that time to be less than emergency period needs resulted in the sharp rise in molasses prices. Molasses prices rose rapidly from the 11 cents per gallon level prevailing in New York in June 1950 to 37.5 cents seven months later, as mentioned above.

Quoted alcohol prices remained at the 90 cent level throughout 1951 although there were indications that sales were made at lower than quoted prices particularly toward the end of the year. The New York molasses prices remained relatively stable until October when

PRICE OF 2.5 GALLONS OF BLACKSTRAP MOLASSES (F.O.B. TANK CAR, N.Y.) COMPARED WITH
 PRICE OF 1 GALLON OF ETHYL ALCOHOL (190 PROOF, TANK CAR, N.Y.)

ANNUALLY, 1935 - 49; MONTHLY, JANUARY 1950 - SEPTEMBER 1952

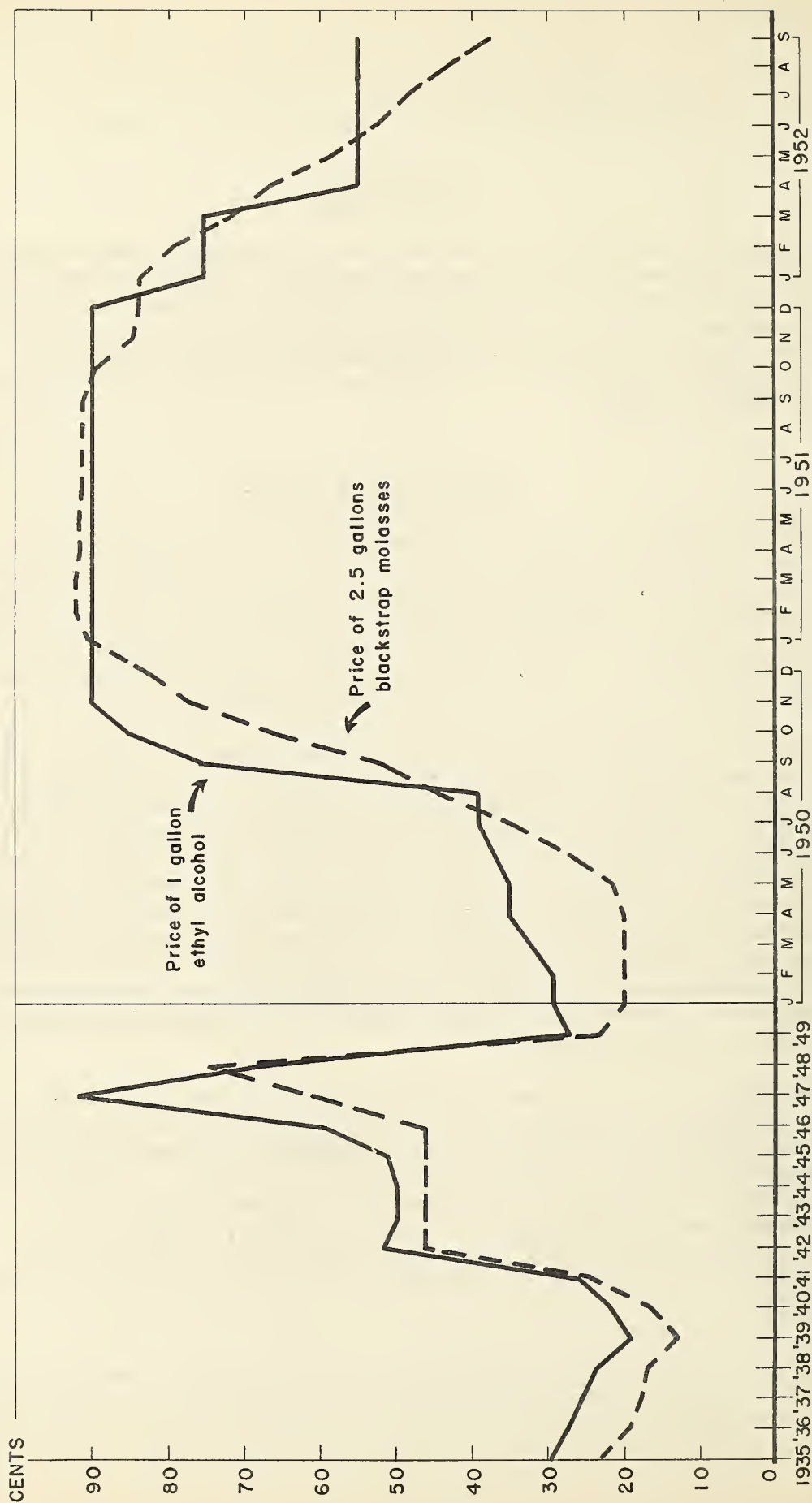


Figure 1.

a 4 cents a gallon decrease occurred. Prices at New Orleans tended to weaken first and a gradual downward trend began in March of 1951 in that market. This downward trend was interrupted in October and prices remained relatively firm until January of 1952. OPS distributor ceiling prices were set in October of 1951 at 35 cents per gallon in New York and 33 cents in New Orleans. At the time ceilings were established, molasses was selling for 36 cents per gallon in New York and 29 cents in New Orleans.

A reduction in the quoted price of alcohol from 90 cents to 75 cents was announced in January 1952. A further reduction to 55 cents occurred in May of this year. No further reductions in alcohol price quotations have been announced although reports indicate that current selling prices are a few cents below the quoted level. At the start of 1952, blackstrap prices again weakened and have continued their decline at a steady rate of .5 to 1.0 cent per week in the major terminal markets. Current prices are about at the pre-Korea level and are some 23.5 cents per gallon below established ceiling prices.

The decline in alcohol and molasses prices has come about because of several factors. Much less domestic alcohol output was required for the synthetic rubber program than had been expected. A large part of Government requirements for this program were taken care of by the importation of alcohol from foreign sources, mainly France. These imports, expansion of synthetic alcohol production, a sharp increase in alcohol production from grains, and some expansion in alcohol produced from molasses resulted in alcohol supplies more than adequate for all domestic requirements and larger amounts of stocks. Thus, with ample supplies of alcohol available alcohol prices weakened.

With the softening alcohol price structure in late 1951 and early 1952, molasses prices also began to weaken and as has been pointed out actually began their decline earlier. Coupled with this situation was the evident availability of record molasses supplies in 1952 which added impetus to the sharp continued decline in molasses prices in 1952. The Cuban crop was first estimated at 325 million gallons, almost a record crop in itself, but as the harvesting season progressed, estimates were continually raised and total Cuban production amounted to about 400 million gallons.

Supplies

Estimated total supplies potentially available to the United States in calendar year 1952 amount to 640 million gallons. This is 175 million gallons or about 38 percent more than the 465 million gallon supply available in 1951. Supplies available to the United States in 1950 and 1951 and the estimated supply potentially available in 1952 are shown in Table 1.

Table 1 U. S. Industrial Molasses Supplies, by Source, Calendar Years 1950 and 1951 and Supplies Potentially Available in 1952

Source	1952 ^{1/}	1951	1950
- - - Million Gallons - - -			
Domestic:			
Hawaii ^{2/}	45	42	41
Puerto Rico	53	50	31
Beet	38	36	39
Mainland Cane Mills	45	42	43
Refiners' Blackstrap	33	33	34
Hydrol	15	18	16
Citrus	9	10	7
Total Domestic	<u>238</u>	<u>231</u>	<u>211</u>
Foreign Countries:			
Cuba	300 ^{3/}	130	187
Mexico	26	25	21
Dominican Republic	26	17	17
Other Countries	<u>50</u>	<u>62</u>	<u>19</u>
Total Foreign	<u>402</u>	<u>234</u>	<u>244</u>
GRAND TOTAL	<u>640</u>	<u>465</u>	<u>455</u>

^{1/} Estimated.

^{2/} Includes only those quantities shipped to U. S. mainland.

^{3/} The amount actually purchased by U. S. buyers of available supplies will be determined largely by the rate of molasses consumption and molasses prices during the remainder of the year.

The much larger supply in 1952 primarily is because Cuba will be able to furnish at least 300 million gallons to U. S. buyers provided they are willing to purchase this quantity. This amount is available even after allowing for local Cuban needs and normal sales to the United Kingdom. To date no interest has been expressed by Great Britain for Cuban molasses and trade reports are to the effect that her 1952 requirements have been obtained from other sources. Thus Cuba probably is faced with finding a market for an even larger quantity than 300 million gallons. It is unlikely that this quantity can be marketed this year and, therefore, Cuba probably will have a large carryover. Although Cuba has announced an intention to curtail sugar production in 1953, below the record crop of this year, it appears that Cuban molasses supplies available for export in 1953 will again be large in view of the size of the probable carryover. Even if most or all of Cuba's supplies were sold before the next crop commences, the period of time is too short for consumption of such an amount. Therefore, under such circumstances stocks in the hands of buyers would be very large when new crop supplies come on the market.

Certain peculiarities have existed in the import situation during 1952. In the light of the weakening market and the evidence of abundant supplies, U. S. buyers were reluctant to pay the asking price of 20 cents per gallon, f.o.b. Cuba set by the Cuban Sugar Stabilization Institute. The Cuban single seller maintained a firm position at this price, the same as the contract price for sales from the 1951 crop, until late in July. As of July 1, Cuban sales to the United States amounted to only 9.5 million gallons. In the meantime as bargaining continued, U. S. buyers were obtaining larger supplies than normal during the first 8 months of the year from other foreign areas. Imports from the Dominican Republic and European countries were notably higher than normal during this period. Figure 2 illustrates the usual calendar year relationship between imports from Cuba and other countries, and the relationship that existed during the first 8 months of this year. Since July, the Cuban asking price has been reduced and this as well as other developments, discussed below, probably will result in purchases from Cuba approaching normal levels. Therefore, approximately the same relationship between Cuban and other imports that has existed in the past will hold for the entire calendar year, the difference being receipts from other countries earlier than usual and from Cuba later than usual.

It should be noted that Figure 2 also shows that the pattern of U.S. imports from foreign countries has changed somewhat in recent years. Beginning in 1950 countries which had been selling very little or no molasses to U. S. buyers were attracted by prices prevailing for molasses in this country. In 1950 molasses imports from countries other than Cuba, Mexico and the Dominican Republic amounted to 8 percent, and in 1951, 26 percent, of total molasses imports.

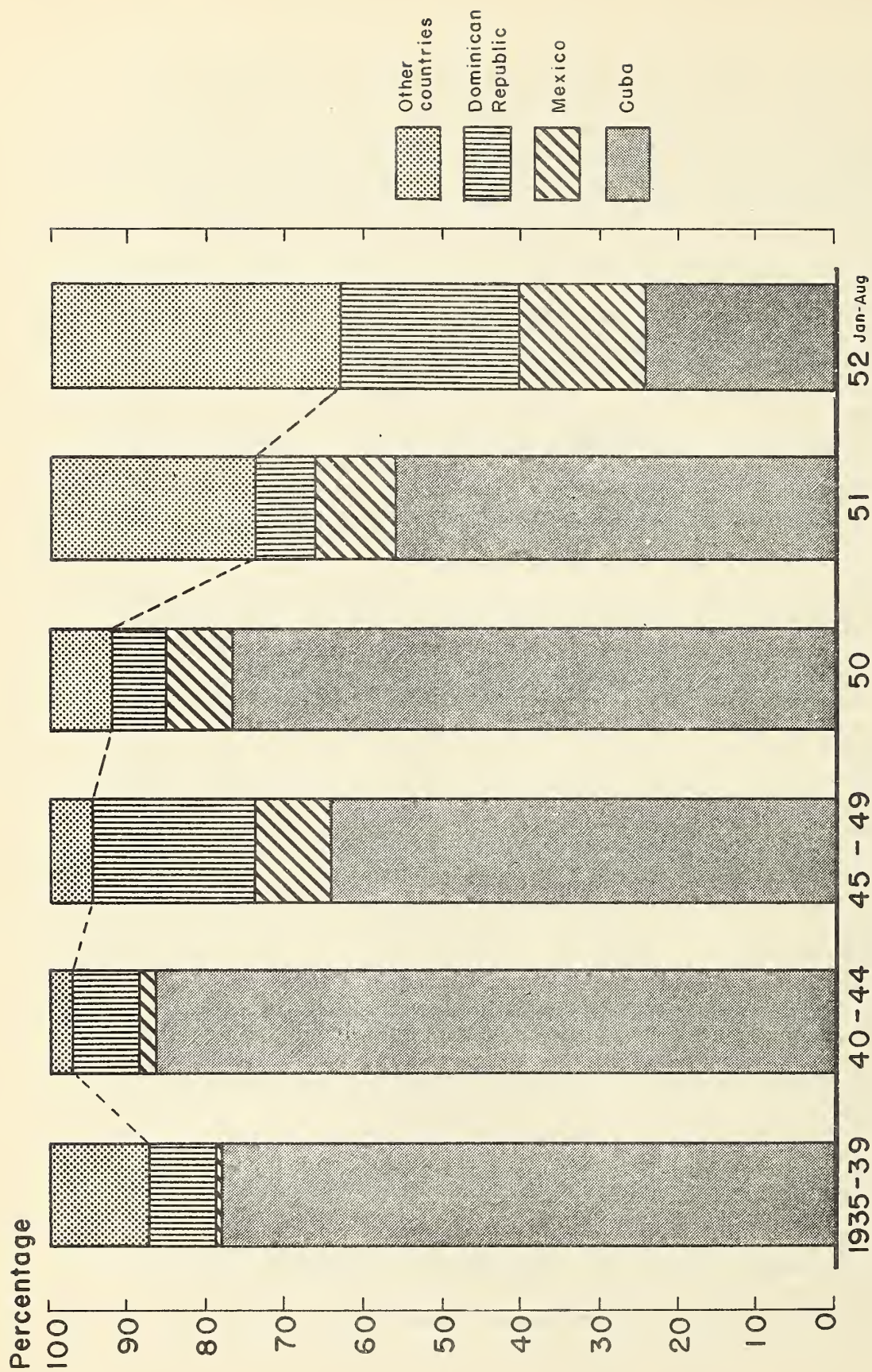


Figure 2. Percentage of total U. S. imports of inedible molasses from Cuba, Mexico, Dominican Republic and other countries. 1935 - August 1952

West Germany, Netherlands, East Indies, France, Egypt, Italy, the Philippines and Formosa are recent additions to countries exporting molasses to the United States. With declining U. S. molasses prices it is possible that imports from these sources, particularly of cane blackstrap, will be smaller in the future. Some European beet molasses probably will continue to be imported for industrial use on the East Coast because ocean freight is more favorable to buyers than rail freight from the eastern domestic beet area and because a larger percentage of domestic beet molasses may be Steffenized.

The first Cuban price reduction occurred in late July when offerings to sell were made at 11.5 cents per gallon f.o.b. Cuba, when purchased in lots of at least 5 million gallons. Lesser quantities were offered at 12.0 cents. The level to which the Cuban seller reduced the f.o.b. Cuba price was influenced to some extent by f.o.b. Puerto Rico sales at 13.0 cents made a short time before to relieve pressure on storage facilities in that Island. In early September an additional agreement was made by Cuba with two large buyers in the United States for sales of 60 million gallons. The base price for this transaction was 12.0 cents per gallon f.o.b. Cuba but provisions were made for price reductions from this base depending on the amount lifted within certain periods. This sliding scale arrangement would result in an f.o.b. Cuban price of seven cents per gallon if the entire quantity were taken in 90 days.

In the early part of 1952 Cuba made arrangements with U. S. buyers to store about 130 million gallons of molasses in the buyers' tanks in the United States. These arrangements were made because of the pressure of the record crop on storage facilities and as no pricing agreements had been reached with buyers, little molasses was moving. The holders of such molasses were given the option to buy at the price Cuba eventually agreed to sell the 1952 crop, and in addition were to be allowed $1\frac{1}{4}$ cents per gallon for storage fees. Any molasses these companies buy as a result of transactions mentioned above may be taken from molasses now stored in the United States. Buyers whose base price in Cuba is 7 cents per gallon can take molasses out of storage in the United States at 9 cents.

Utilization

Molasses utilization in relation to available supplies indicates the heavy downward pull exerted on prices by supplies in excess of requirements in 1952. As has been pointed out potential U. S. molasses supplies in 1952 are at least 38 percent larger than 1951 supplies. Supplies in 1951 were adequate for all domestic needs although feed utilization probably would have been greater at lower molasses prices. Estimates of molasses utilization in calendar years

1950, 1951 and 1952 are shown below. These data were developed by using statistics of the Alcohol Tax Unit of the Bureau of Internal Revenue covering molasses utilization in alcohol plants in 1950, 1951 and to date in 1952, estimating probable use in alcohol the remainder of the year, and estimating all other uses including feed for all years. No information is available on stocks and no changes in stocks were considered.

	Calendar Year		
	1952	1951	1950
	- - Million gallons - - -		
Molasses Used For:			
Ethyl alcohol	162	152	143
Butanol and acetone	5	7	20
Spirits and rum	3	2	2
Feed	300	245	232
Yeast, vinegar and citric acid	53	52	51
Edible and miscellaneous	7	7	7
Total Utilization	<u>530</u>	<u>465</u>	<u>455</u>

Although indications are that utilization of molasses is considerably higher in feed and slightly greater in alcohol than in 1951, this increased utilization still does not approach potentially available supplies and has not checked the downward trend in molasses prices.

Feed molasses utilization in 1952 is estimated at about 300 million gallons. This amounts to some 55 million gallons or about a fourth more than feed usage in 1951. Increased feed molasses utilization has come about primarily because molasses prices are once again very favorable in relation to grain. Figure 3 shows the historical and current differentials between corn and molasses prices on an equivalent feeding value, in relation to the quantity of molasses used for feed. About 6.5 gallons of molasses is equivalent in feeding value to one bushel of corn. Generally utilization of molasses as feed has been somewhat higher in those years when molasses prices have been most favorable in relation to corn prices. However, because molasses has gone into several usages in the past, increased feed utilization in times when molasses prices were low did not tend to reduce the corn-molasses price differential. Although considerable quantities of molasses would be used in feeding regardless of price because of palatableness and other feeding qualities, the total amount used for feeds has been in part a result of molasses prices and generally not a contributing factor to the level of molasses prices. As pointed out previously, molasses prices are closely related to alcohol prices. In nearly all but emergency periods alcohol represents the lower price use for molasses, and so long as there are supplies of molasses above other needs competing for usage in alcohol, molasses prices will remain geared to alcohol prices.

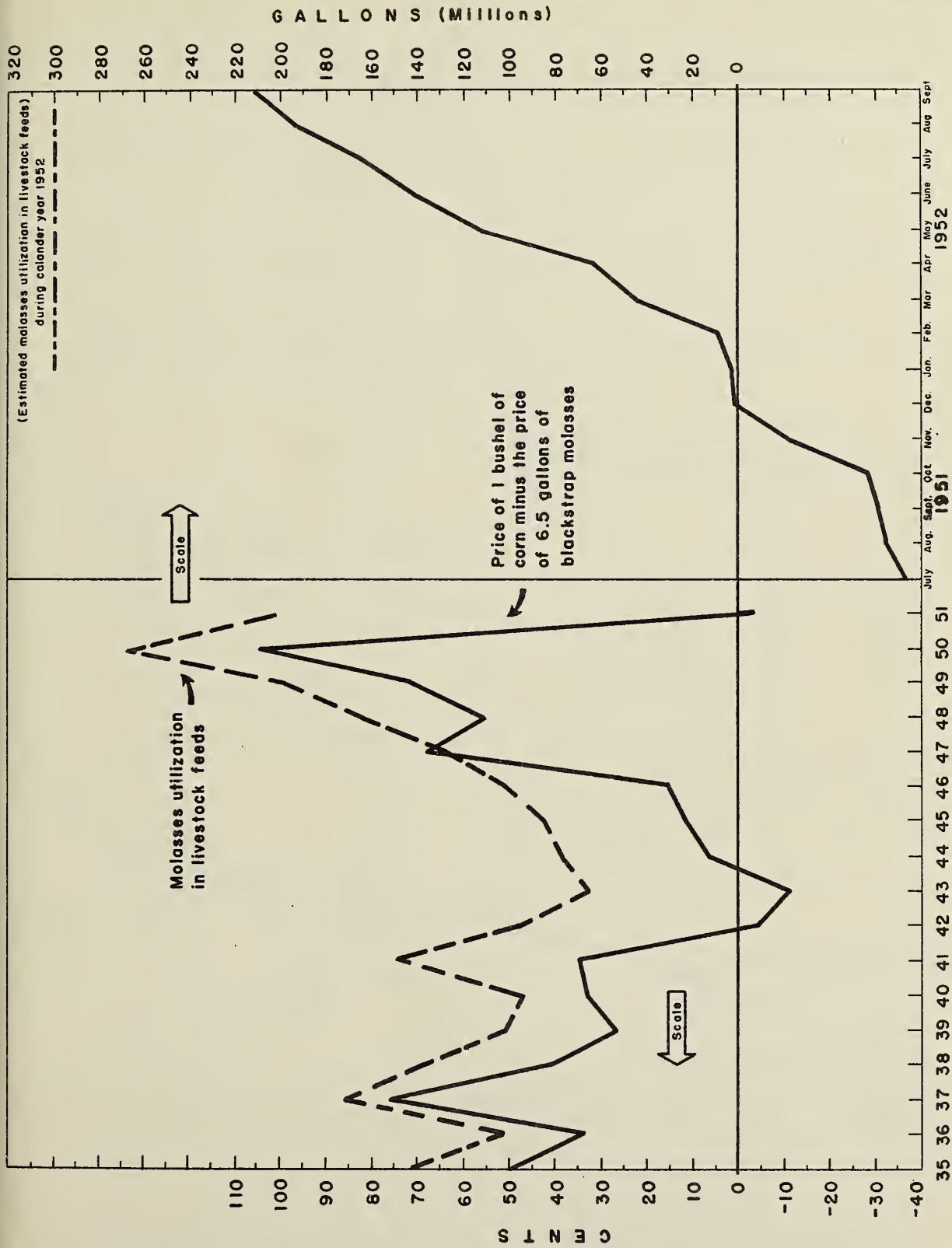


Figure 3. New York Wholesale Corn-Molasses Price Differential (equivalent feeding value basis), fiscal years 1935-51, monthly July 1951-September 1952; and Estimated Feed Usage of Molasses, Fiscal years 1935-51.

MILLION
WINE
GALLONS

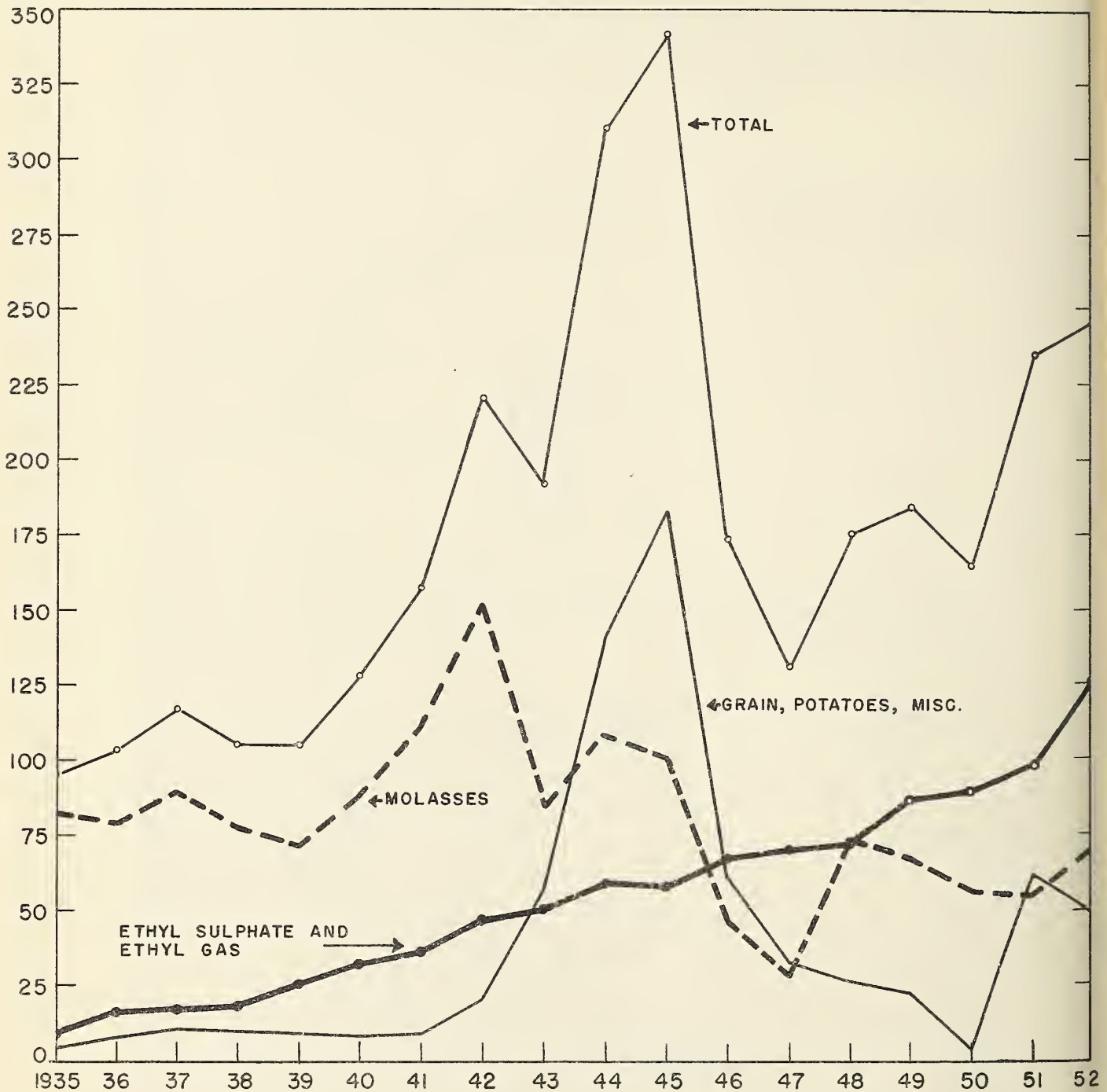


Figure 4. Quantity of Ethyl Alcohol Produced in Industrial Alcohol Plants from Specified Raw Materials, Fiscal Years, 1935-52

Future molasses utilization is clouded by the uncertainty of the position of fermentation alcohol in the ethyl alcohol industry. Figure 4 shows the relative position of molasses as a raw material in the manufacture of alcohol. Of particular importance is the steady upward trend in the production of synthetic alcohol from petroleum products. From less than 10 percent of the total in 1935, production of alcohol from petroleum products has grown to the current level of approximately 51 percent of the total. During the same period alcohol production from molasses has declined from about 80 percent of the total to 28 percent. Another factor of importance is that the present annual capacity of the synthetic alcohol industry is estimated at 154 million gallons and is expected to reach 225 million gallons by 1954. This capacity will be sufficient to produce far in excess of our peacetime utilization of industrial alcohol for all purposes.

Ethyl alcohol supplies and utilization for calendar years 1950, 1951, and estimated for 1952 are shown below.

	Calendar Year		
	1952	1951	1950
	- Million Wine Gallons -		
<u>Supplies</u> 1/			
Beginning stocks	59.4	32.1	21.2
Domestic production (source):			
Molasses	70.0	66.4	62.5
Ethyl sulphate and ethylene gas	125.0	124.5	107.6
Grain	29.0	55.9	28.3
Miscellaneous	5.0	6.1	4.7
Total Production	229.0	252.9	203.1
Imports	29.0	118.2	27.3
Total Supply	317.4	403.2	251.6
<u>Utilization</u> 2/			
Synthetic rubber	67.9	120.6	2.6
Solvents, aldehydes and other chemical products	176.5	201.1	184.9
Tax paid	16.0	18.1	26.9
Completely denatured alcohol and miscellaneous	7.0	4.0	5.1
Total Utilization	267.4	343.8	219.5
Ending Stocks	50.0	59.4	32.1

1/ Supply figures for 1950 and 1951 obtained from statistics of Alcohol Tax Unit of Bureau of Internal Revenue. Data for 1952 were developed by using statistics of the Alcohol Tax Unit covering supplies January-August and estimating probable supplies the remainder of the year.

2/ Synthetic Rubber data furnished by Office of Synthetic Rubber Reconstruction Finance Corporation. Tax paid figures and ending stocks obtained from Alcohol Tax Unit statistics. Calendar year utilization in solvents, aldehydes and other chemical products is residual resulting from total utilization minus synthetic rubber, tax paid, completely denatured alcohol, and miscellaneous usage.

It has already been pointed out that the use of domestically produced alcohol in the synthetic rubber program was less than anticipated. According to the Reconstruction Finance Corporation, a total of 191.10 million gallons of alcohol was used in the production of synthetic rubber from November of 1950 when the program got into operation until September 1, 1952, when the last plant using alcohol discontinued operation. Of this total amount 2.61 million gallons were used in 1950, 120.55 million gallons in 1951, and 67.94 million in 1952.

The Reconstruction Finance Corporation secured 126.55 million gallons of alcohol from foreign sources for use in the program and 90.15 million gallons from domestic output. This amounts to about 72 percent of total imports in the 1950-52 period and about 13 percent of total domestic production. Approximately 24.78 million gallons in excess of actual usage were obtained by the Reconstruction Finance Corporation. Imports and domestic supplies obtained for the program and actual usage in 1950, 1951 and 1952 are as follows:

	Calendar Year			Total 1950-52
	1950	1951	1952	
	- - -	Million wine gallons		(190 proof) - -
Supplies				
Beginning stocks	-	8.36	29.88	-
Imports	7.42	94.19	24.94	126.55
Domestic	<u>3.60</u>	<u>48.42</u>	<u>38.13</u>	<u>90.15</u>
Total	11.02	150.97	92.95	216.70
Utilization	2.61	120.55	67.94	191.10
Losses	<u>0.05</u>	<u>0.54</u>	<u>0.23</u>	<u>0.82</u>
Ending stocks	<u>8.36</u>	<u>29.88</u>	<u>24.78</u>	<u>24.78</u>

Source: Reconstruction Finance Corporation

Alcohol produced from wet "distress" grains made up a large part of the domestic alcohol used in the program. Although no figures are available on the amount of alcohol made from molasses that was used in the program, indications are that such alcohol made up only a small part of total domestic alcohol used to meet synthetic rubber requirements.

The Reconstruction Finance Corporation discontinued the operation of the butadiene plant at Louisville, Kentucky, on July 1, 1952, and the Kubota, Pennsylvania, plant on September 1. These plants are in a stand-by status and operations could be resumed should conditions warrant it. These plants were using ethyl alcohol in the production of butadiene for use in synthetic rubber production. Eight butadiene plants remain in operation but all of these produce butadiene directly from petroleum products which is less expensive than the use of ethyl alcohol. The inventory of 24.78 million gallons will be used as circumstances require need for rubber above the capacity of the petroleum butadiene plants. Therefore, barring unforeseen developments, the Reconstruction Finance Corporation does not plan to purchase further quantities of alcohol for use in the program.

The withdrawal of the Reconstruction Finance Corporation from both the foreign and domestic markets has resulted in a sharp reduction in imports and a greater proportion of domestic production available to the chemical industry. Supplies of alcohol have been adequate to meet all requirements and also to build up stocks.

Because of the growth of the synthetic alcohol industry, which can produce alcohol cheaply, to a capacity that will exceed requirements and because of reduced requirements for alcohol, it is apparent that fermentation alcohol can be produced only if raw material costs are very low. To the producer of molasses this means that as long as some molasses continues to go into this usage, prices received for all molasses probably will be low and will bear little relationship to the feed value of molasses. The difficult problem facing the molasses industry is to determine the means that would be effective in expanding other markets to absorb the quantities of molasses now competing for alcohol usage. The opinion of most observers is that increased feed utilization offers the only market of sufficient potential size to accomplish this purpose.

With further reference to Figure 3 depicting the price differential between molasses and corn, it can be seen that in only three years since 1935 have molasses prices been greater than corn on an equivalent feeding value basis. These were the war years of 1942 and 1943 when molasses prices were only slightly higher than corn prices, and 1951 when a fairly sizeable differential existed. In most other years corn prices have been considerably higher than molasses on an equivalent feeding value basis. This demonstrates the benefits that possibly can accrue to the molasses industry if feed utilization were expanded to the extent that molasses prices would be related to grain prices even at some discount. Molasses is an excellent carbohydrate feed and possesses additional qualities of palatability, binding, and dust settling. Every effort should be expended by the molasses industry in promoting feed utilization. The present favorable price of molasses as a feed affords an excellent atmosphere in which to begin.

A P P E N D I X

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Table 2.

ESTIMATED UTILIZATION OF INDUSTRIAL MOLASSES IN THE U. S. MAINLAND,
FISCAL YEARS 1935-1950, AND CALENDAR YEARS 1951 AND 1952 1/

	1935-1939										
	Average	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952
Industrial Molasses Utilization In:											
Industrial Alcohol Plants for:											
Ethyl alcohol	177.1	171.4	249.6	224.7	103.4	70.3	175.9	156.7	129.1	152.2	162.0
Products other than ethyl alcohol (butyle alcohol and acetone primarily)	20.7	12.5	54.5	43.0	30.3	27.9	19.8	13.7	20.4	7.0	5.0
Total for industrial alcohol	197.8	183.9	304.1	267.7	133.7	98.2	195.7	170.4	149.5	159.2	167.0
In distilleries (spirits and rum)	5.4	8.7	11.1	10.6	8.3	3.1	2.6	2.6	2.2	2.3	3.0
Total in alcohol plants and distilleries 2/	203.2	192.6	315.2	278.3	142.0	101.3	198.3	173.0	151.7	161.5	170.0
Livestock Feed, Direct Feeding, and Silage 3/	130.9	64.4	76.7	83.8	102.1	128.5	164.5	197.4	266.8	244.5	300.0
Other Uses											
Yeast, citric acid, and vinegar	38.0	38.5	41.2	47.3	46.6	51.0	51.0	51.0	51.0	52.0	53.0
Edible sirup and molasses and miscellaneous	6.0	15.7	9.0	10.3	21.8	11.4	8.3	7.5	7.0	7.0	7.0
Total other uses 4/	44.0	54.2	50.2	57.6	68.4	62.4	59.3	58.5	58.0	59.0	60.0
Total Utilization	378.1	311.2	442.1	419.7	312.5	292.2	422.1	428.9	476.5	465.0	530.0

1/ All data are in process of revision to a calendar year basis. Calendar year data for all years will be published in the next molasses issue of "Sugar Reports".

2/ Data are from the Alcohol Tax Unit, Bureau of Internal Revenue 1935-39 and 1947-52 and U.S. Tariff Commission 1943-46.

3/ Data from 1935-39 and 1947-52 are estimated by subtracting molasses used in alcohol plants and distilleries and an estimate of "other uses" from total mainland molasses supplies and using the residual as molasses utilized in feeds. No changes in stocks were considered. Information from 1943-46 from data issued by U.S. Tariff Commission.

4/ Data from 1935-39 and 1947-52 estimated by Sugar Branch and 1943-46 from U.S. Tariff Commission.

TABLE 3. INDUSTRIAL MOLASSES, MAINLAND PRODUCTION, INSHIPMENTS AND IMPORTS INTO THE UNITED STATES
MAINLAND, FISCAL YEARS 1935-50, CALENDAR YEARS 1951 AND 1952 (1000 Gallons) 1/

Year	Mainland cane 2/	Domestic beet 3/	Refiners' blackstrap 4/	Citrus 5/	Hydrol 6/	TOTAL MAINLAND PRODUCTION
1935	15,686	24,900	29,814	- - -	9,700	80,100
1936	23,380	25,400	28,863	- - -	88,300	85,943
1937	31,061	24,700	29,245	- - -	9,200	94,206
1938	33,531	26,400	25,619	- - -	8,000	93,550
1939	40,506	27,200	29,299	- - -	9,000	106,005
1940	31,716	24,800	27,972	- - -	10,000	94,488
1941	21,476	26,520	32,386	- - -	11,800	92,182
1942	26,052	21,763	28,398	- - -	15,400	91,613
1943	26,601	26,058	22,704	- - -	15,500	90,863
1944	33,184	23,415	32,744	2,554	14,200	106,097
1945	34,116	35,562	35,329	3,394	15,600	124,001
1946	32,165	40,861	25,389	7,783	11,700	117,898
1947	26,404	45,056	27,504	10,226	16,700	125,890
1948	27,076	35,886	33,677	11,609	14,000	122,248
1949	40,464	31,539	33,581	7,311	15,200	128,096
1950	37,722	42,610	33,433	7,285	16,400	137,450
1951	42,911	36,000	32,775	9,000	18,000	138,686
1952	45,000	38,000	33,000	9,000	15,000	140,000

1/ All data is in process of revision to a calendar year basis. Calendar year data for all years will be published in the next molasses issue of "Sugar Reports".

2/ 1935-47 from "World Sugar Situation", Bureau of Agricultural Economics, USDA, September 1949, 1948-50 from unpublished data of Sugar branch, P.H.A.

3/ 1935-40 estimated. 1940-50 are reports submitted by beet sugar companies to the Sugar branch, 1951-52 estimated.

4/ 1935-47 estimated by multiplying the refiners' production of sugar (short tons, raw value) by 6.25; 1948-51 from reports submitted to the Sugar branch, P.H.A.; 1952 estimated by Sugar branch, P.H.A.

5/ Obtained from records of the Florida Citrus Processors Association, 1952 production estimated.

6/ Estimated by multiplying total dextrose sales by a constant, assuming 2.09 gallons of hydrol per 100 pounds of dextrose.

(continued)

TABLE 3
(Cont'd.)INDUSTRIAL MOLASSES, MAINLAND PRODUCTION, INSHIPMENTS AND IMPORTS INTO THE UNITED STATES
MAINLAND, FISCAL YEARS 1935-50, CALENDAR YEARS 1951 AND 1952 (1000 Gallons)

Year	Cuba 7/	Dominican Republic 7/	Dutch Indies 7/	Mexico 7/	Hawaii 8/	Puerto Rico 7/	Other 7/9/	Total imports & inshipments	TOTAL MARKET SUPPLIES
1935	- - -	- - -	- - -	- - -	- - -	- - -	- - -	312,500	392,600
1936	- - -	- - -	- - -	- - -	- - -	- - -	- - -	251,500	337,443
1937	246,757	22,712	11,265	- - -	21,246	25,294	31,236	359,210	453,416
1938	162,636	16,890	18,889	- - -	35,251	28,892	18,842	281,400	374,950
1939	133,864	22,105	5,845	- - -	24,993	20,716	17,037	225,900	331,905
1940	210,573	19,998	- - -	1,340	28,389	20,562	5,477	288,997	383,485
1941	279,889	37,043	- - -	3,998	41,494	17,478	7,453	390,330	482,512
1942	296,495	17,091	- - -	6,973	38,625	23,433	5,293	388,522	480,135
1943	135,133	1,463	- - -	7,585	44,495	3,255	2,779	191,632	282,495
1944	250,614	25,692	- - -	4,597	43,850	19,049	7,944	348,975	455,072
1945	170,189	28,968	- - -	1,826	37,261	13,304	5,961	255,763	379,764
1946	67,043	13,315	- - -	- - -	38,041	19,696	6,099	149,694	267,892
1947	65,339	23,033	- - -	5,500	30,492	23,736	7,607	166,305	292,195
1948	158,460	19,118	- - -	16,048	43,796	41,133	7,679	299,853	422,106
1949	160,202	17,287	- - -	22,672	41,327	41,133	12,234	300,799	428,895
1950	196,389	16,964	- - -	28,616	43,299	44,656	17,119	339,040	476,490
1951	130,472	16,693	- - -	20,613	41,572	49,951	61,799	325,682	464,368
1952	300,000	26,000	- - -	25,195	45,000	53,000	50,000	499,000	640,000
				26,000					

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7/ Summarized from Bureau of Customs data and reports from the Department of Commerce.

8/ 1935-47 from published data Department of Commerce. 1948-52 data furnished by Hawaiian Sugar Planters' Association.

9/ Includes shipments from Canada, Poland, Peru, Java, Netherlands, Haiti, British West Indies, French West Indies, Italy, Denmark, Germany, France, British Guiana, Nicaragua, Trinidad, Egypt, Philippines, Panama, and Formosa.

TABLE 4
PRODUCTION OF INDUSTRIAL MOLASSES, EXPORTS AND INSHIPMENTS TO THE UNITED STATES
MAINLAND, THE PORTION OF THE PRODUCTION NOT SHIPPED TO THE UNITED STATES MAINLAND,
BY PRINCIPAL OFFSHORE AREAS SUPPLYING THE UNITED STATES MAINLAND
CALENDAR YEARS 1935 - 1952 (1000 GALLONS)

	CUBA		PUERTO RICO	
Year	Production <u>2/4/</u>	Imports into the U. S. mainland <u>5/1/</u>	Production minus imports into U. S. mainland <u>2/6/</u>	Inshipments to the U.S. mainland <u>5/1/</u> Production minus inshipments into U. S. mainland
1935	182,080	176,525	5,555	52,728
1936	243,519	184,282	59,237	25,749
1937	357,610	237,272	120,338	27,962
1938	234,166	131,240	102,926	19,304
1939	250,753	160,386	90,367	21,034
1940	302,992	233,896	64,096	26,263
1941	439,953	348,964	90,989	18,492
1942	322,230	194,031	138,199	12,098
1943	139,543	145,220	5,677	10,025
1944	453,914	249,533	204,381	17,632
1945	194,741	113,614	81,127	16,268
1946	233,650	57,958	175,682	17,287
1947	299,400	105,387	194,013	31,956
1948	322,000	139,258	192,742	44,810
1949	291,599	161,872	129,727	43,589
1950	262,365	186,784	75,581	31,224
1951	288,625	130,462	158,153	49,951
1952	397,900	n.a.	n.a.	53,000

- 1/ The import and inshipment data relate to calendar years. 1952 inshipments estimated by Sugar Branch, PMA.
- 2/ Crop-year basis, the processing season extending from January through June.
- 3/ Processing in Hawaii takes place in each month of the year and is reported on a calendar year basis.
- 4/ Data are from "World Sugar Situation" BAE, September 1949 and from reports by the Cuban Sugar Stabilization Institute.
- 5/ Summarized from Customs' sheets and reports from the Department of Commerce. Estimated inshipment for 1952.
- 6/ Data are from "Annual Report of the President, Association of Sugar Producers of Puerto Rico".
- (continued)

TABLE 4
(cont'd.)
PRODUCTION OF INDUSTRIAL MOLASSES, IMPORTS AND INSHIPMENTS TO THE UNITED STATES
MAINLAND, THE PORTION OF THE PRODUCTION NOT SHIPPED TO THE UNITED STATES MAINLAND,
BY PRINCIPAL OFFSHORE AREAS SUPPLYING THE UNITED STATES MAINLAND
CALENDAR YEARS 1935 - 1952 (1000 GALLONS)

Year	HAWAII		TOTAL ALL AREAS		
	Production 3/7/	Inshipments to the U. S. 8/ mainland	Imports and Production minus inshipments to the U.S.		Production minus imports and inshipments to U. S. mainland
			mainland	mainland	
1935	42,665	28,570	291,345	256,823	33,522
1936	46,469	21,232	331,383	231,263	100,125
1937	45,327	31,015	444,137	296,249	145,888
1938	48,291	28,141	329,057	178,635	150,372
1939	44,743	28,979	329,996	210,399	119,597
1940	45,342	31,842	392,534	297,001	95,533
1941	49,344	45,441	529,597	412,897	116,700
1942	47,004	36,839	430,634	242,968	187,666
1943	50,390	49,805	230,133	205,050	25,083
1944	46,659	38,531	528,773	305,746	223,027
1945	44,769	36,942	279,910	166,824	113,086
1946	36,121	32,226	308,171	107,431	200,690
1947	48,768	37,461	398,968	174,804	224,164
1948	43,515	44,433	430,315	228,551	201,764
1949	45,770	42,523	396,644	247,984	148,660
1950	41,381	41,076	353,268	259,084	94,184
1951	44,723	41,572	393,648	221,995	171,553
1952 2/	48,000	45,000	515,700	98,000 2/	---
7/ 1935-48 supplied by the California and Hawaiian Sugar Corporation, Ltd.; 1949-51 by the Hawaiian Sugar					

7/ 1935-48 supplied by the California and Hawaiian Sugar Corporation, Ltd.; 1949-51 by the Hawaiian Sugar Planters' Association.

8/ Data supplied by the Hawaiian Sugar Planters' Association.

9/ Inshipments from Puerto Rico and Hawaii estimated by Sugar Branch, P.M. Cuban imports not included.

TABLE 5 RELATIONSHIPS BETWEEN THE NEW YORK CORN-MOLASSES PRICE AND THE ESTIMATED VOLUME OF UTILIZATION OF INDUSTRIAL MOLASSES IN FEED, FISCAL YEARS 1935-50. CALENDAR YEARS 1951 AND 1952

Year	Price of 1 bushel of corn minus the price of $6\frac{1}{2}$ gals. of molasses $\frac{1}{2}$ / (cents)	Estimated molasses utilization in livestock feeding (million gallons)
1935	/ 49.8	142.4
1936	/ 33.5	102.7
1937	/ 76.0	171.2
1938	/ 40.1	136.9
1939	/ 26.7	101.8
1940	/ 33.1	93.0
1941	/ 33.9	149.6
1942	- 3.8	94.4
1943	- 11.1	64.4
1944	/ 6.4	76.7
1945	/ 11.4	83.8
1946	/ 14.9	102.1
1947	/ 67.9	128.5
1948	/ 55.5	164.5
1949	/ 71.8	197.4
1950	/ 104.4	266.8
1951	- 29.0	245.0
1952 <u>3/</u>	/ 52.4	300.0

Source: 1935-49 from Kutish, L. John, Marketing of Feed Molasses, Sugar Branch, PMA, USDA., Feb. 1950, Table 6, page 10. 1950-1952; Sugar Branch PMA. Hydrol and citrus molasses is added for the above period. 1950-1952 corn prices are from Divn. of Historical and Statistical Research, BAE.

1/ $6\frac{1}{2}$ gallons of molasses is the carbohydrate equivalent of 1 bushel of corn.
2/ Corn prices controlled March 1943-Nov. 1946; molasses prices Jan. 1942-March 1947. 3/ Price differential for period Jan.-Sep. 1952; estimated molasses utilization for entire calendar year.

TABLE 5.
MOLASSES, BLACKSTRAP: PRICE PER GALLON $\frac{1}{2}$, F.O.B. TANK CAR NEW YORK,
MONTHLY, JANUARY 1935-SEPTEMBER 1952 (CENTS)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
1935	7.62	7.62	8.12	8.20	8.25	8.25	8.25	8.25	8.25	8.25	8.25	8.25
1936	8.25	8.25	8.25	8.25	8.25	8.25	8.25	7.55	7.25	7.25	7.25	7.25
1937	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.19	7.00	7.00	7.00
1938	7.00	7.00	7.00	7.00	6.70	6.50	6.50	6.50	6.50	6.50	6.50	6.50
1939	6.50	6.50	4.50	4.50	4.50	4.50	4.50	4.50	5.25	5.75	5.75	5.75
1940	5.75	5.75	5.75	5.75	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
1941	7.00	7.00	7.25	7.88	8.20	8.50	9.25	9.50	10.25	12.80	13.44	15.19
1942	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50
1943	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50
1944	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50
1945	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50
1946	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50	18.50
1947	18.50	18.50	18.50	20.50	23.70	22.38	21.75	22.30	23.25	25.70	30.38	34.12
1948	37.00	37.00	37.00	37.00	37.00	34.44	26.60	25.50	24.00	21.20	20.50	20.50
1949	15.25	9.75	9.00	8.70	8.25	8.25	8.25	8.25	8.25	8.25	8.25	8.10
1950	8.00	8.00	8.00	8.00	8.40	10.90	14.00	17.55	20.75	26.25	30.85	32.50
1951	36.50	36.50	36.50	36.50	36.50	36.50	36.50	36.50	36.50	35.92	33.69	33.50
1952	33.50	31.50	28.62	26.70	23.50	21.00	19.30	17.30	15.00			

1/ Prices were controlled from January 1942 - March 1947

Source: January 1935-December 1950 compiled by Bureau of Agricultural Economics from Oil, Paint and Drug Reporter; January 1951 - September 1952 from Sugar Branch, PMA, Weekly Molasses Market Report.

Table 7

INDUSTRIAL MOLASSES USED IN THE PRODUCTION OF ETHYL ALCOHOL AND
OTHER PRODUCTS OF INDUSTRIAL ALCOHOL PLANTS AND IN DISTILLED SPIRITS IN
DISTILLERIES, FISCAL YEARS 1935-52 (GALLONS)

Year ended June 30	Industrial molasses <u>1/</u> used in the production of--			Total usage of industrial mo- lasses in indus- trial alcohol plants and dis- tilleries.
	Ethyl alcohol <u>2/</u>	Other products of: industrial alco- hol plants <u>3/</u>	Distilled spirits <u>4/</u>	
1935	187,849,299	11,378,631	7,416,832	206,644,762
1936	173,385,873	13,075,949	5,737,208	192,199,030
1937	202,631,056	32,472,450	5,439,660	240,543,166
1938	162,557,843	27,987,171	4,164,633	194,709,647
1939	158,908,347	18,841,142	4,314,729	182,064,218
1940	194,601,378	43,544,144	4,328,001	242,473,523
1941	221,820,592	59,602,277	3,528,327	284,950,996
1942	281,082,026	51,494,017	5,091,586	337,667,629
1943	174,368,827	15,020,815	8,670,107	198,059,749
1944	252,802,147	56,800,846	11,086,788	320,689,781
1945	232,175,077	46,281,165	10,610,766	289,067,008
1946	109,258,237	30,272,711	8,261,498	147,792,446
1947	70,310,252	27,945,575	3,072,209	101,328,036
1948	175,947,462	19,768,298	2,554,650	198,270,410
1949	156,731,884	13,652,330	2,622,888	173,007,102
1950	129,110,565	20,411,727	2,217,661	151,739,953
1951	128,536,798	11,269,687	2,669,334	142,475,819
1952	158,298,468	6,000,000 <u>5/</u>	2,447,139	166,745,607

1/ Includes Invert molasses from 1935-44.

2/ Includes "molasses mixtures" used in making ethyl alcohol.

3/ Chiefly butyl alcohol and acetone.

4/ Chiefly rum and gin.

5/ Estimated by the Sugar Branch.

Source: Annual Report of the Commissioner of Internal Revenue, U.S. Treasury Department and Monthly Reports of the Alcohol Tax Unit, Bureau of Internal Revenue.

TABLE 8 QUANTITY OF ETHYL ALCOHOL PRODUCED IN INDUSTRIAL ALCOHOL PLANTS FROM SPECIFIED RAW MATERIALS,
FISCAL YEARS ENDED JUNE 30, 1935-52 (1000 WINE GALLONS)

Year	From molasses 1/		From ethyl sulphate:		From grain 2/		From all other materials 3/		Total net 4/ ethyl	
	Quantity	Pct.	Quantity	Pct.	Quantity	Pct.	Quantity	Pct.	Quantity	Pct.
1935	81,284	85.5	9,255	9.7	2,600	2.7	1,938	2.1	95,077	100.0
1936	78,609	76.2	16,573	16.1	7,271	7.0	771	.7	103,224	100.0
1937	88,955	75.7	17,836	15.2	9,817	8.4	856	.7	117,464	100.0
1938	77,383	73.1	18,617	17.6	9,645	9.1	162	.2	105,807	100.0
1939	71,492	67.6	25,244	23.9	8,179	7.7	384	.8	105,799	100.0
1940	87,952	68.6	32,216	25.1	7,356	5.7	754	.6	128,278	100.0
1941	110,751	70.4	36,791	23.4	9,228	5.9	517	.3	157,287	100.0
1942	152,314	69.0	47,692	21.6	20,304	9.2	514	.2	220,824	100.0
1943	85,784	43.7	50,915	26.5	56,767	29.6	481	.2	191,947	100.0
1944	109,222	35.1	59,860	19.3	108,554	34.9	33,379	10.7	311,015	100.0
1945	100,106	29.3	58,778	17.2	148,261	43.3	35,008	10.2	342,153	100.0
1946	45,352	26.4	67,109	38.7	55,244	31.9	5,157	3.0	173,362	100.0
1947	28,505	21.8	70,161	53.6	20,917	15.9	11,364	8.7	130,947	100.0
1948	74,910	42.9	73,804	42.2	18,241	10.4	8,174	4.5	175,129	100.0
1949	67,047	36.3	86,721	46.9	6,037	3.3	24,940	13.5	184,745	100.0
1950	56,873	34.5	89,672	54.3	1,341	.8	17,135 5/	10.4	165,021	100.0
1951 7/	56,130	24.0	98,635 6/	42.1	60,318	25.8	19,093	8.1	234,176	100.0
1952 7/	69,126	28.1	125,221 6/	50.9	48,270	19.6	3,378	1.4	245,995	100.0

1/ Additional amounts of alcohol were made from "molasses mixtures"; such alcohol is included in the "From all other materials" column. 2/ Additional amounts of alcohol were made from "grain mixtures"; such alcohol is included in the "From all other materials" column. 3/ Chiefly sulphite liquors, cellulose pulp, chemical and crude alcohol mixtures, whey, pineapple juice, grain and molasses mixtures, and potatoes and potato products. Potatoes were important when they produced, in 1946 - 1,985,102 wine gallons of ethyl alcohol, in 1947 - 6,769,117 wine gallons, in 1948 - 2,560,402 wine gallons, and in 1949 - 11,331,637 wine gallons.

4/ Gross production of ethyl alcohol minus the number of wine gallons of unfinished products used in re-distillation. 5/ Includes 14,259,167 wine gallons from ethylene gas in 1950. 6/ Includes production from ethylene gas. 7/ Computed by Sugar Branch, PMA, by using historical raw material yields computed from "Statistics on Alcohol".

Source: "Statistics on Alcohol", Alcohol Tax Unit, Bureau of Internal Revenue, converted from proof gallons of 100 proof to wine gallons of 190 proof by Sugar Branch, PMA.

COMPARISON OF PRICES OF 2.5 GALLONS BLACKSTRAP MOLASSES (F.O.B. TANK CAR, N.Y.)
AND .4 BUSHEL NO. 3 YELLOW CORN (DELIVERED, N.Y.) WITH PRICE OF A GALLON OF
ETHYL ALCOHOL (190 PROOF, TANK CAR, N.Y.) ANNUALLY, 1935 TO DATE

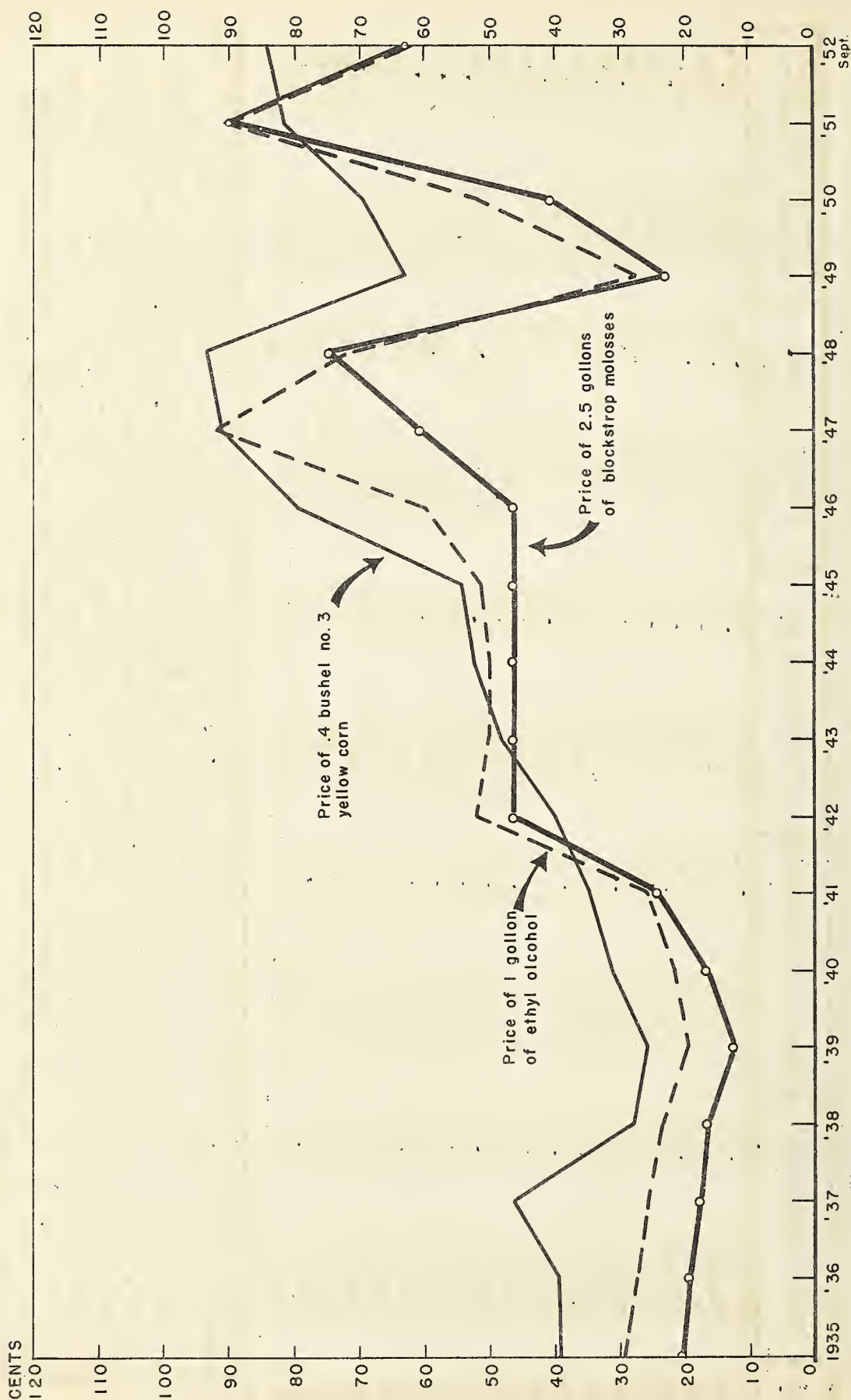


Figure 5.

Table 9
ETHYL ALCOHOL: FISCAL YEAR, WITHDRAWALS AND LOSSES, PRODUCTION, AND STOCKS ON HAND AT END OF FISCAL YEAR, INDUSTRIAL ALCOHOL PLANTS, 1935-52
(WINE GALLONS)

Fiscal Year Ended June 30	Tax Paid 1/	Used For Denaturation 2/	For Use of the United States	Other Uses 3/	Total		Production	Stocks June 30
					Withdrawals plus Losses 4/	Losses 5/		
1935	8,942,614	85,794,610	148,745	1,180,203	292,246	26,658,418	95,076,784	13,290,922
1936	12,659,225	90,778,272	523,018	1,270,413	230,974	105,461,904	103,224,317	11,210,703
1937	16,994,550	94,381,233	548,330	1,349,985	277,997	113,552,095	117,463,784	14,981,335
1938	15,250,844	86,454,306	500,400	1,414,731	276,252	103,896,533	105,807,276	16,866,646
1939	11,658,403	92,444,532	556,690	1,514,829	261,098	106,435,552	105,793,690	16,242,287
1940	12,812,790	117,537,719	644,476	1,542,218	261,207	132,798,410	128,277,745	11,472,921
1941	14,666,589	144,677,481	1,945,267	1,608,053	366,916	163,264,306	157,237,035	5,469,653
1942	13,122,282	197,242,208	22,799,641	1,612,611	433,818	235,210,560	220,824,467	15,270,663
1943	2,987,021	214,896,689	54,276,196	1,115,309	1,056,528	274,331,743	191,946,797	112,064,853
1944	3,251,946	512,336,521	64,419,908	1,231,806	888,696	582,128,877	311,015,234	67,326,076
1945	14,650,826	511,287,760	58,531,532	1,160,599	725,591	586,356,408	342,152,507	75,599,510
1946	24,875,343	207,083,385	6,711,245	1,379,022	596,476	240,645,471	173,361,529	58,173,404
1947	24,812,662	177,910,490	1,547,320	1,374,409	550,769	206,195,650	130,946,630	14,219,068
1948	20,399,153	178,764,046	149,709	1,810,407	472,517	201,595,832	174,885,311	20,143,869
1949	21,497,741	170,487,303	339,415	1,420,010	536,197	194,280,666	184,744,897	26,850,196
1950	21,349,931	169,321,932	305,910	2,230,184	526,316	193,734,273	165,021,443	12,225,645
1951	22,529,573	178,414,394	13,538,477	1,325,004	470,316	221,277,764	234,176,320	62,508,149
1952	14,587,948	257,696,660	61,103,713	1,305,609	500,000 6/	335,193,930	245,944,995	46,513,741

1/ For beverage use.

2/ Represents withdrawals for denaturation 1934 through 1941. For 1942 through 1947 represents all products used for denaturation which were regarded, upon receipt at denaturation plants, as alcohol, whether originally produced as alcohol by industrial alcohol plants or as spirits or unfinished spirits by registered distilleries. This explains why the withdrawal data are so much larger than the production figures during the middle 1940's.

3/ Represents withdrawals for hospital, scientific, and educational use, for export, and in Puerto Rico for medicinal, beverage, and industrial use. 4/ Losses in industrial alcohol bonded warehouses, exclusive of losses in denaturing plants. 5/ See 2/ 6/ Estimated by Sugar Branch, FMA. Source: Same as for Table 8.

Table 10 PRODUCTION OF DENATURED ALCOHOL INDUSTRIAL DENATURING PLANTS,
FISCAL YEARS 1935-52 (WINE GALLONS)

Fiscal year ended June 30	Specially denatured	Completely denatured	Total
1935	58,384,395	38,746,679	97,031,074
1936	64,965,485	36,522,358	101,477,843
1937	80,084,231	22,118,378	102,202,659
1938	69,009,024	25,598,717	94,607,741
1939	83,561,077	17,179,433	100,740,510
1940	111,409,797	15,352,033	126,761,830
1941	135,834,261	17,676,172	153,510,433
1942	179,217,153	28,628,181	207,845,334
1943	198,524,631	24,569,788	222,894,419
1944	471,781,825	52,331,761	524,113,586
1945	494,008,004	33,087,533	527,095,537
1946	186,657,673	26,144,437	212,802,110
1947	147,348,371	36,395,715	183,744,086
1948	149,394,037	34,887,789	184,281,826
1949	164,273,211	10,221,492	174,494,703
1950	170,259,583	4,414,058	174,673,641
1951	243,998,613	1,438,564	245,437,177
1952	261,923,558	993,073	262,916,631

Source: "Statistics on Alcohol," Alcohol Tax Unit, Bureau of Internal Revenue.

Table 11
USES OF SPECIALLY DENATURED ALCOHOL FROM INDUSTRIAL DENATURING
PLANTS, FISCAL YEARS 1935-51. (Wine Gallons)

Fiscal year ended June 30	Used as a raw material converted in chemical manufacturing 2/		Used as a solvent 1/		Used as a raw material converted in chemical manufacturing 2/		Used other than solvent & chemical manufactur- ing 3/		Total Utilization
	Aldehydes	Synthetic rubber	Other Chemical Products	Aldehydes	Synthetic rubber	Other Chemical Products	Aldehydes	Synthetic rubber	
1935 4/	-	-	-	-	-	-	-	-	-
1936 5/	16,650,777	-	-	28,607,288	-	-	467,803	-	109,133,841
1937 5/	27,160,082	-	-	32,458,847	-	-	471,826	-	139,109,095
1938 4/	-	-	-	-	-	-	-	-	-
1939 4/	-	-	-	-	-	-	-	-	-
1940 6/	24,572,238	-	-	33,209,336	-	-	4,344,958	-	108,364,633
1941	30,338,549	-	-	40,322,793	-	-	4,021,979	-	134,525,061
1942	34,402,948	-	-	40,354,169	-	-	8,089,670	-	169,237,400
1943	44,732,885	20,399,165	-	41,379,684	-	-	2,208,836	-	181,797,962
1944	59,730,282	286,033,171	-	52,202,416	-	-	1,717,107	-	465,993,050
1945	55,733,932	315,940,167	-	53,524,181	-	-	2,438,024	-	495,667,007
1946	54,913,723	62,671,789	-	27,800,474	-	-	994,335	-	196,383,320
1947	65,550,902	9,259,489	-	28,026,693	-	-	995,697	-	157,070,209
1948	72,932,439	370,818	-	28,493,876	-	-	1,029,532	-	147,842,717
1949	68,253,434	1,427,787	-	32,017,886	-	-	855,518	-	148,99,499
1950	87,155,696	3,872,867	-	35,797,968	-	-	975,401	-	179,085,637
1951	57,779,759	17,415,696	-	45,793,628	-	-	1,175,245	-	232,871,021

1/ Specially denatured alcohol used as a solvent is utilized principally in connection with the following products or uses: (a) lacquers, varnishes, and enamels; (b) plastics; (c) solvents and thinners for cellulose, shellac, and resin products; (d) lotions, perfumes, and other toilet preparations, (e) the processing of industrial, food, drug, and other products, for instance the dehydration of nitrocellulose, (f) pharmaceutical products, such as rubbing alcohol, and (g) cleaning, preserving, and flavoring preparations.

2/ When used as a raw material, the denatured alcohol reacts in the formation of other chemicals. Principal products using denatured alcohol as a raw material are: aldehydes, synthetic rubber, vinegar, ethyl acetate, ethyl chloride, esters, ethers, ethylene dibromide, etc.

3/ This category includes: Brake fluids, cutting oils, other fluid uses, motor fuels and fuel uses, and experimental uses.

4/ No data available. No reports issued.

5/ Total quantities used, including large quantities previously recovered for re-use.

6/ Beginning with 1940, the figures relate only to new denatured alcohol, and exclude previously recovered alcohol which was re-used.

Source: Alcohol Tax Unit, Bureau of Internal Revenue, Treasury Department

TABLE 12
ETHYL ALCOHOL, 190 PROOF, NEW YORK AVERAGE MONTHLY WHOLESALE PRICE,
TAX FREE, TANK CAR LOTS, JANUARY 1935-SEPTEMBER 1952
(CENTS PER GALLON)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
1935	28.5	28.5	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
1936	29.2	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	25.5
1937	25.0	25.0	25.0	25.0	25.0	25.5	26.0	26.0	26.0	26.0	26.0	26.0
1938	26.0	26.0	24.2	24.0	24.0	24.0	23.5	22.0	22.0	22.8	23.0	22.5
1939	20.8	20.0	19.6	18.5	18.5	18.5	18.5	18.5	18.5	20.1	20.5	20.5
1940	20.5	20.5	20.5	20.5	20.5	20.5	20.5	22.5	22.5	23.5	23.5	24.5
1941	24.5	24.5	24.5	25.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5	26.5
1942	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0
1943	52.0	52.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
1944	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
1945	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.5	52.7	55.5
1946	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	55.5	76.9 1/2	84.0
1947	84.0	84.0	84.0	98.0	98.0	98.0	98.0	87.0	87.0	90.6	96.0	94.9 2/
1948	94.5	94.5	93.0	91.0	88.0	86.5	85.0	77.5	75.0	75.0	62.5	46.2
1949	38.5	24.5	21.0	21.0	21.0	21.0	29.0	29.0	29.0	29.0	29.0	29.0
1950	29.0	29.0	32.0	35.0	35.0	37.0	39.0	39.0	75.0	85.0	90.0	90.0
1951	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
1952	75.0	75.0	75.0	75.0	55.0	55.0	55.0	55.0	55.0			

Source: Oil, Paint, and Drug Reporter.

1/ Beginning and ending of price controls.

2/ In the second week of December the price quotation changed from a price "at works" to a price "delivered east of the Mississippi River".

Table 13

INSHIPMENTS OF INDUSTRIAL MOLASSES TO THE U. S. MAINLAND EXPRESSED
AS A PERCENT OF TOTAL ANNUAL PRODUCTION IN CUBA, PUERTO RICO
AND HAWAII, CALENDAR YEARS 1935-51

Year	Imports and Inshipments to the United States Mainland			
	Cuba	Puerto Rico	Hawaii	All Areas
1935	96.9	19.2	67.0	88.5
1936	75.7	62.2	45.7	69.9
1937	66.3	67.9	68.4	66.7
1938	56.0	41.4	58.3	54.3
1939	64.0	61.0	64.8	63.8
1940	78.8	59.4	70.2	75.7
1941	79.3	45.9	92.1	78.0
1942	58.4	23.5	78.4	56.4
1943	104.1	24.9	98.8	89.1
1944	55.0	62.5	82.6	57.8
1945	58.3	40.3	82.5	59.4
1946	24.8	45.0	89.2	34.9
1947	35.2	62.9	76.8	43.8
1948	41.9	81.8	102.2	53.1
1949	55.5	73.5	92.3	62.5
1950	71.2	63.1	99.3	73.3
1951	45.2	82.8	92.9	77.3

Source: Table 4.

Table 14 MOLASSES USED IN ETHYL ALCOHOL PRODUCTION,
MONTHLY, JANUARY 1951-AUGUST 1952

Month	1951	1952
	. . . Million gallons . . .	
January	4.9	12.4
February	6.2	8.9
March	7.2	11.0
April	13.5	9.1
May	17.3	9.5
June	11.8	16.6
July	12.9	21.4
August	17.4	14.8
September	16.5	-
October	15.3	-
November	16.4	-
December	12.9	-

Source: Alcohol Tax Unit, Bureau of Internal Revenue.